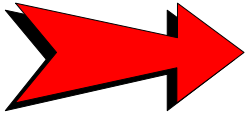


**Clean Air Act, Section 126  
Interstate Ozone Transport Rulemaking**

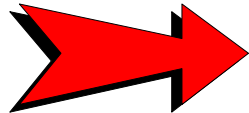
**Small Business  
Regulatory Enforcement Fairness Act  
Outreach Meeting  
April 14, 1998**

**United States Environmental Protection Agency  
Office of Management and Budget  
Small Business Administration**

# **CLEAN AIR ACT OF 1990**



**TITLE I...ATTAINMENT/MAINTENANCE OF NATIONAL  
AMBIENT AIR QUALITY STANDARDS**



**TITLE II...MOBILE SOURCES**

**TITLE III...AIR TOXICS**

**TITLE IV...ACID DEPOSITION CONTROL**

**TITLE V...PERMITS**

**TITLE VI...STRATOSPHERIC OZONE/GLOBAL CLIMATE PROT.**

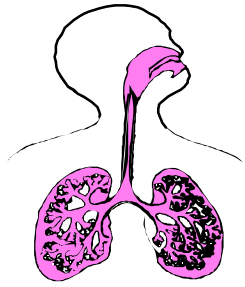
**TITLE VII...ENFORCEMENT**

**TITLE VIII...MISCELLANEOUS PROVISIONS**

**TITLE IX...CLEAN AIR RESEARCH**

**TITLE X...DISADVANTAGED BUSINESS CONCERNS**

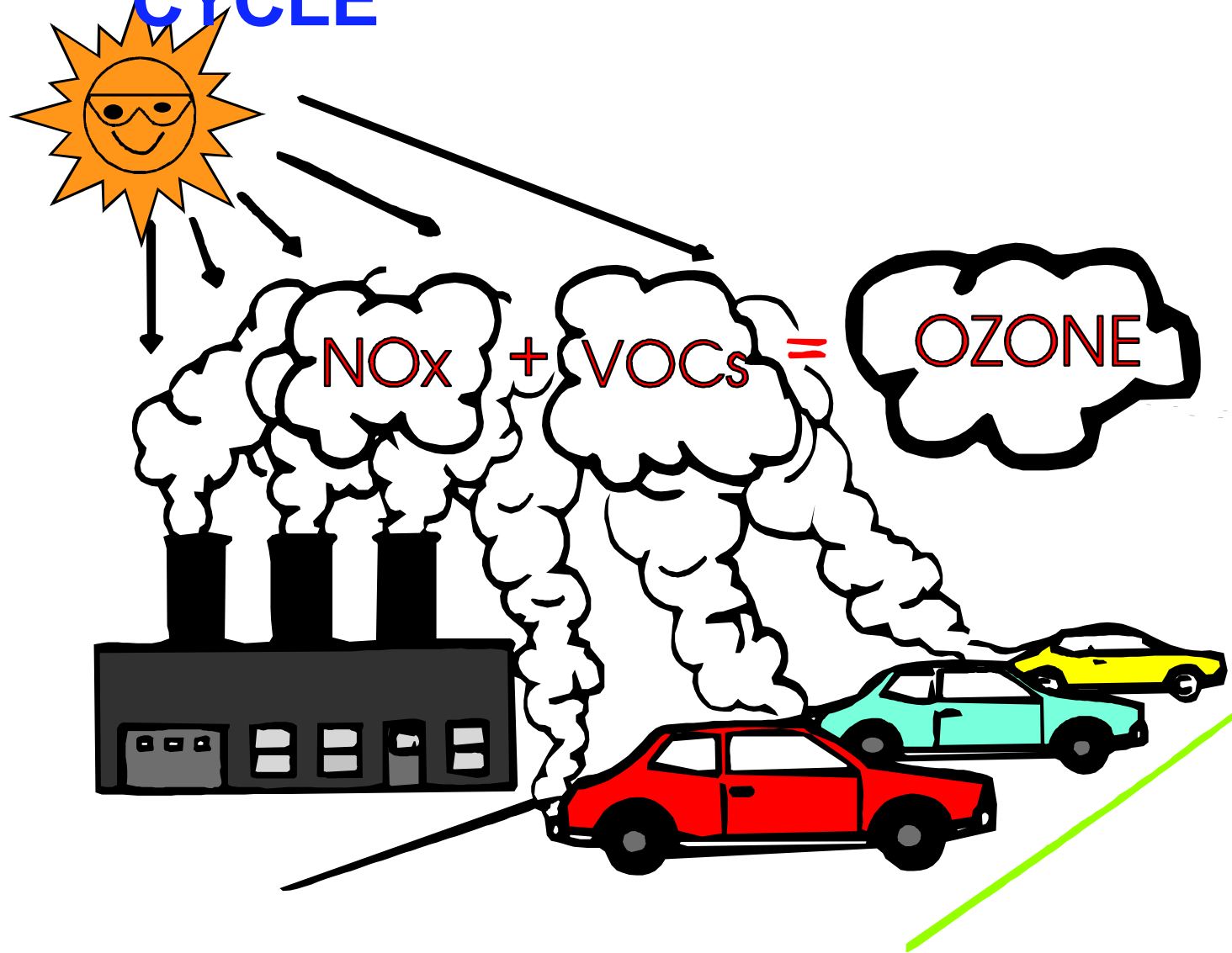
**TITLE XI...EMPLOYMENT TRANSITION ASSISTANCE**



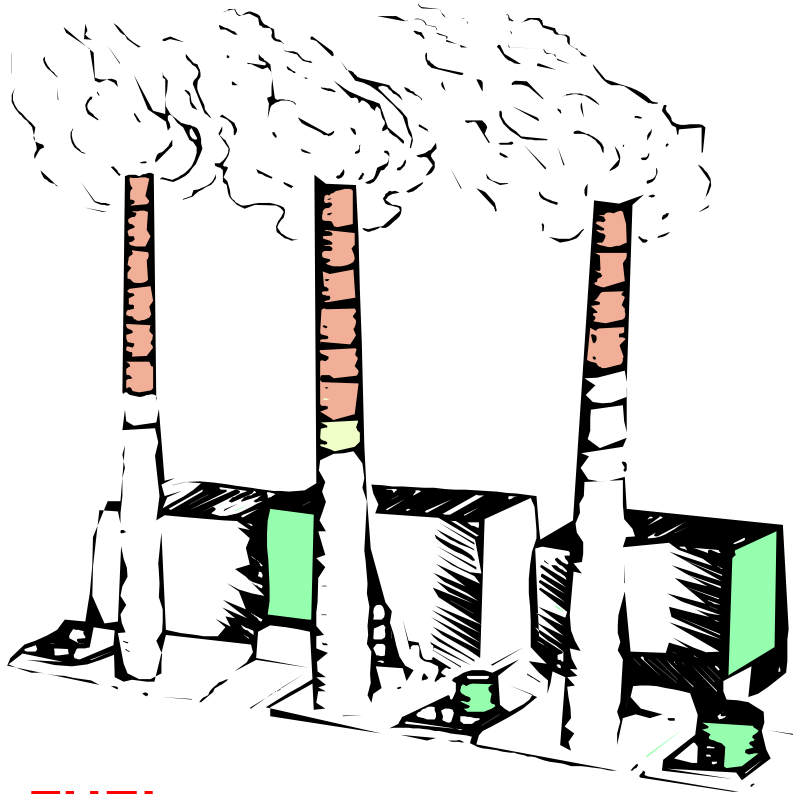
# **Ozone-Related Health Effects of Concern**

- 
- **Difficulty in breathing, shortness of breath**
  - **Aggravated/prolonged coughing and chest pain**
  - **Increased aggravation of asthma, susceptibility to respiratory infection resulting in increased hospital admissions and emergency room visits**
  - **Repeated exposures could result in chronic inflammation and irreversible structural changes in the lungs, that can lead to premature aging of the lungs and illness such as bronchitis and emphysema**
  - **Growing evidence suggests association with premature death**

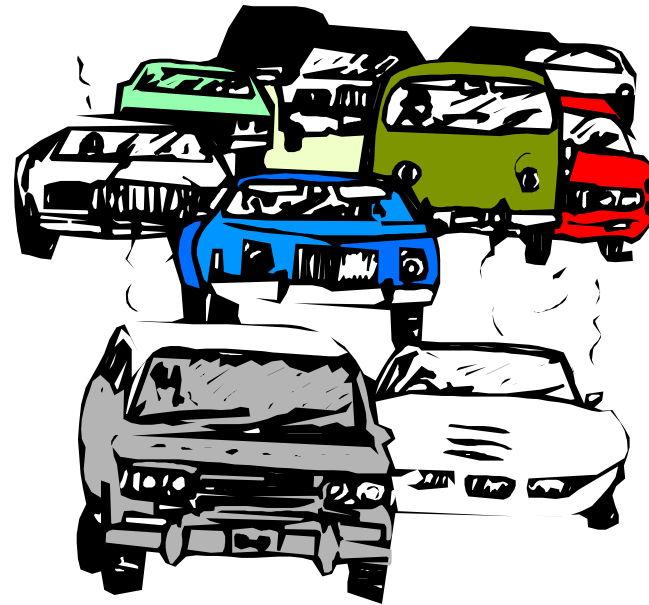
# THE OZONE FORMATION CYCLE



# **NO<sub>x</sub> EMISSIONS...EXAMPLES**



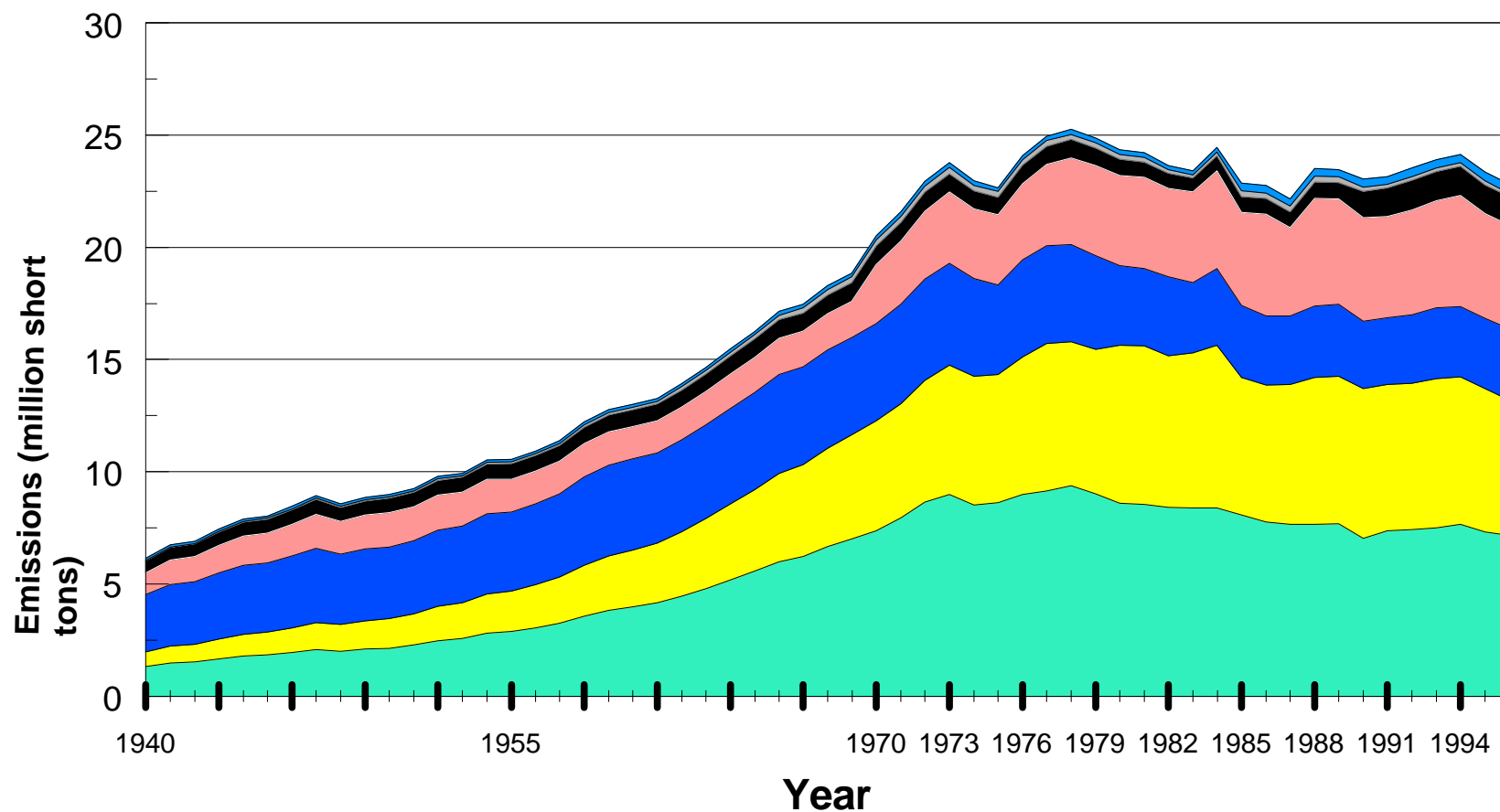
**FUEL  
COMBUSTION**



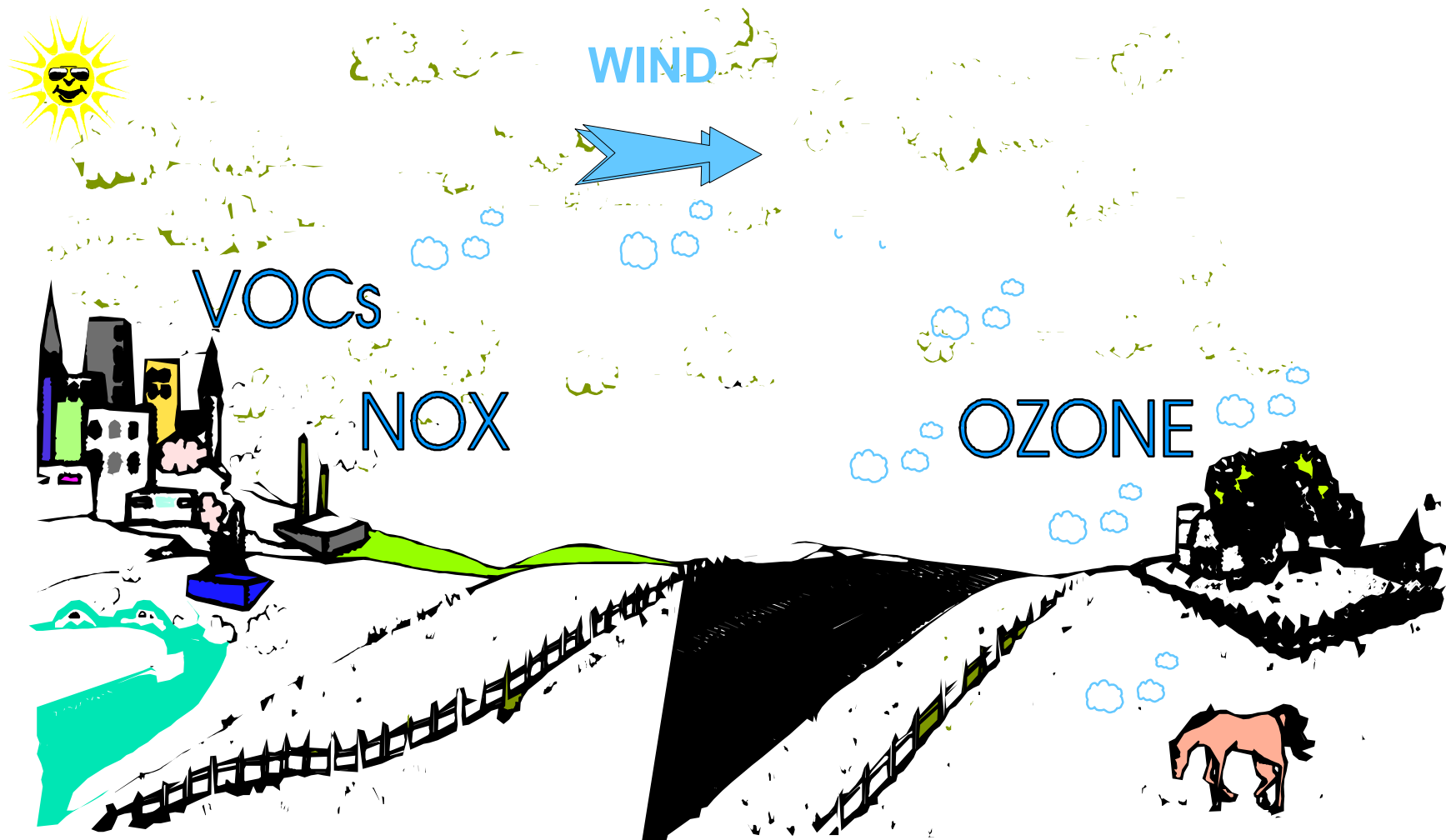
**MOTOR  
VEHICLES**

## Trend in NITROGEN OXIDE Emissions by 7 Principal Source Categories

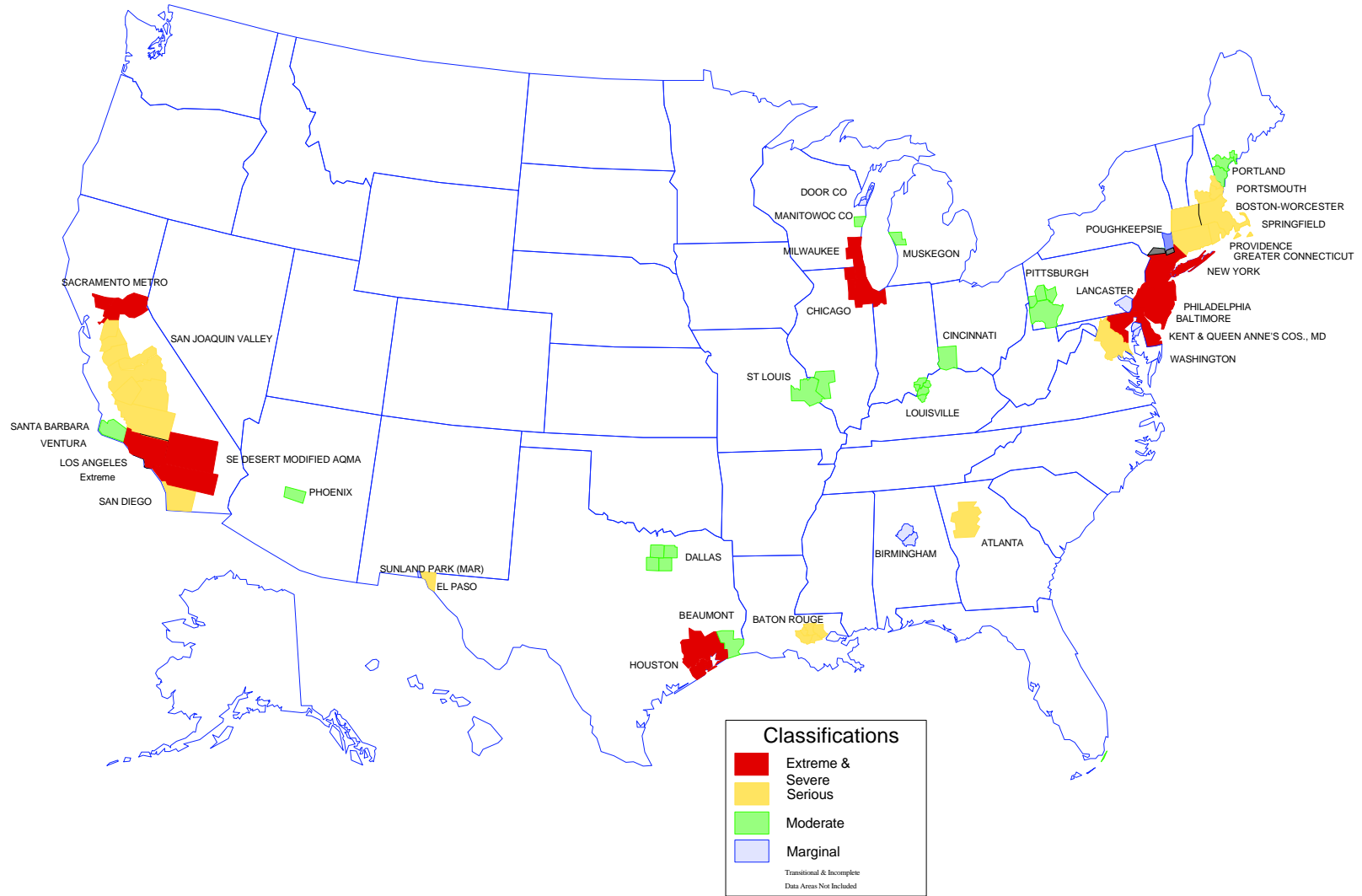
On-Road Comb-Util Comb-Ind Non-Road  
Comb-Other Chem Other



# OZONE CAN BE TRANSPORTED....



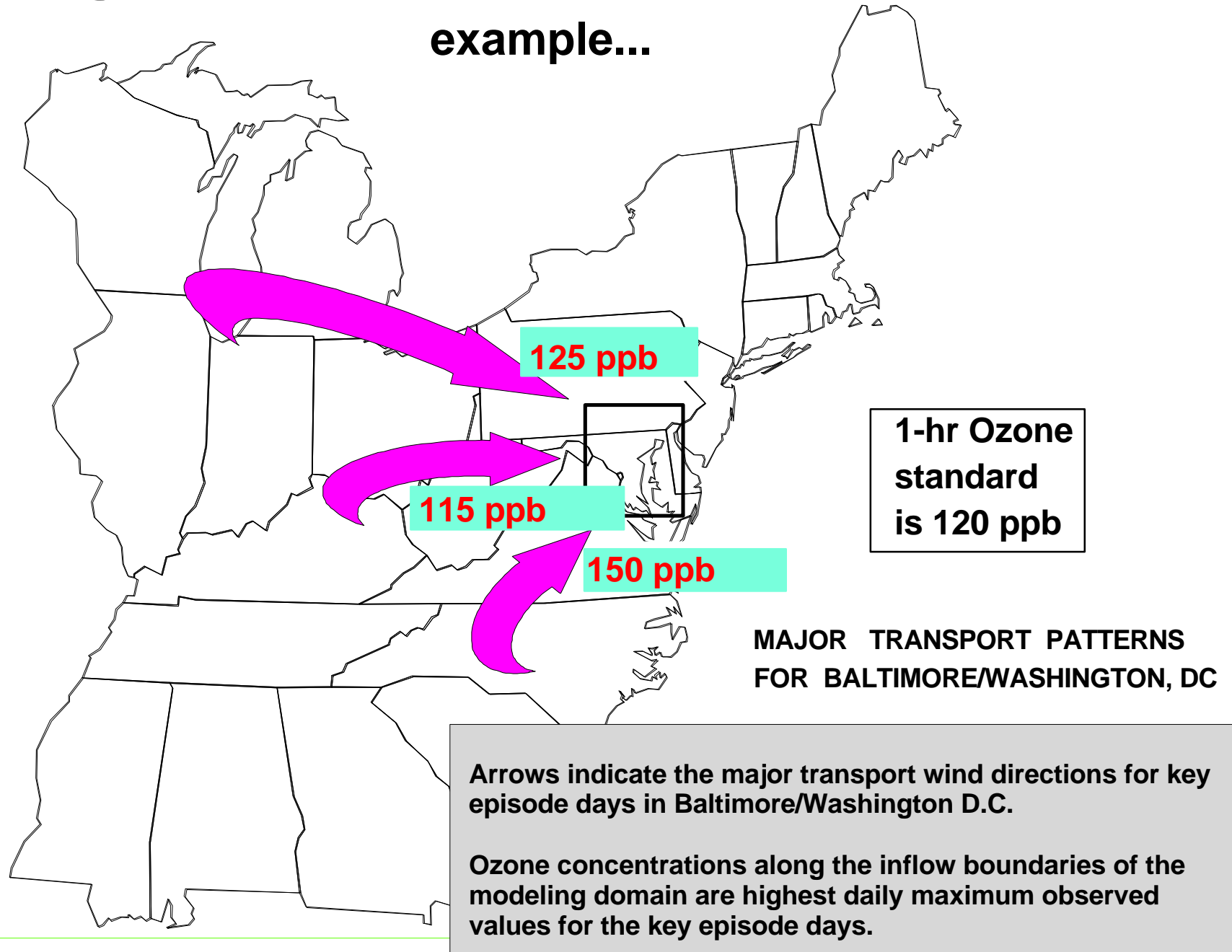
# 1-Hour Ozone Problem Areas





# Regional Ozone Issue ... Transport

example...



## **Nov. 7, 1997 ... EPA Proposal**

- **Makes finding of significant contribution to nonattainment in downwind State(s)**
- **Assigns NO<sub>x</sub> emissions budgets for each identified State**
- **Suggests additional controls for large point sources**
- **Permits States to choose what NO<sub>x</sub> measures to adopt to meet the State-wide emission budget**
- **Requires 22 States & D.C. to submit SIPs providing NO<sub>x</sub> emission reductions to mitigate transport in eastern half of US ...**



## Ozone Transport Region (OTR) & Commission

- ▶ Established by US Congress to provide a forum for addressing regional ozone nonattainment issues in NE.
- ▶ Consists of 12 northeastern states plus DC. USEPA is a non-voting member.
- ▶ Purpose is to:
  - to assess interstate transport of ozone/precursors in OTR, and
  - recommend strategies for controlling the interstate transport of pollution

## OTC NO<sub>x</sub> Memorandum of Understanding

- Agreed to by eleven NE States and DC
  - Emission decreases at boilers above 250 mmBtu/hr
  - Emissions cap at electric utility generating facilities 15 megawatts (MW) or greater
- Control levels (boilers above 250 mmBtu) in 2003:
  - For most States, either 0.15 lbs/mmBtu or a 75% reduction from 1990 NO<sub>x</sub> levels
  - In certain areas, either 0.20 lbs/mmBtu rate or a 55% reduction

# Ozone Transport Assessment Group (OTAG)

37 States  
and DC



## **OTAG Goal**

To identify and recommend reductions in transported ozone and its precursors which, in combination with other measures, will enable attainment and maintenance of the national ambient ozone standard.

# Major OTAG Conclusions

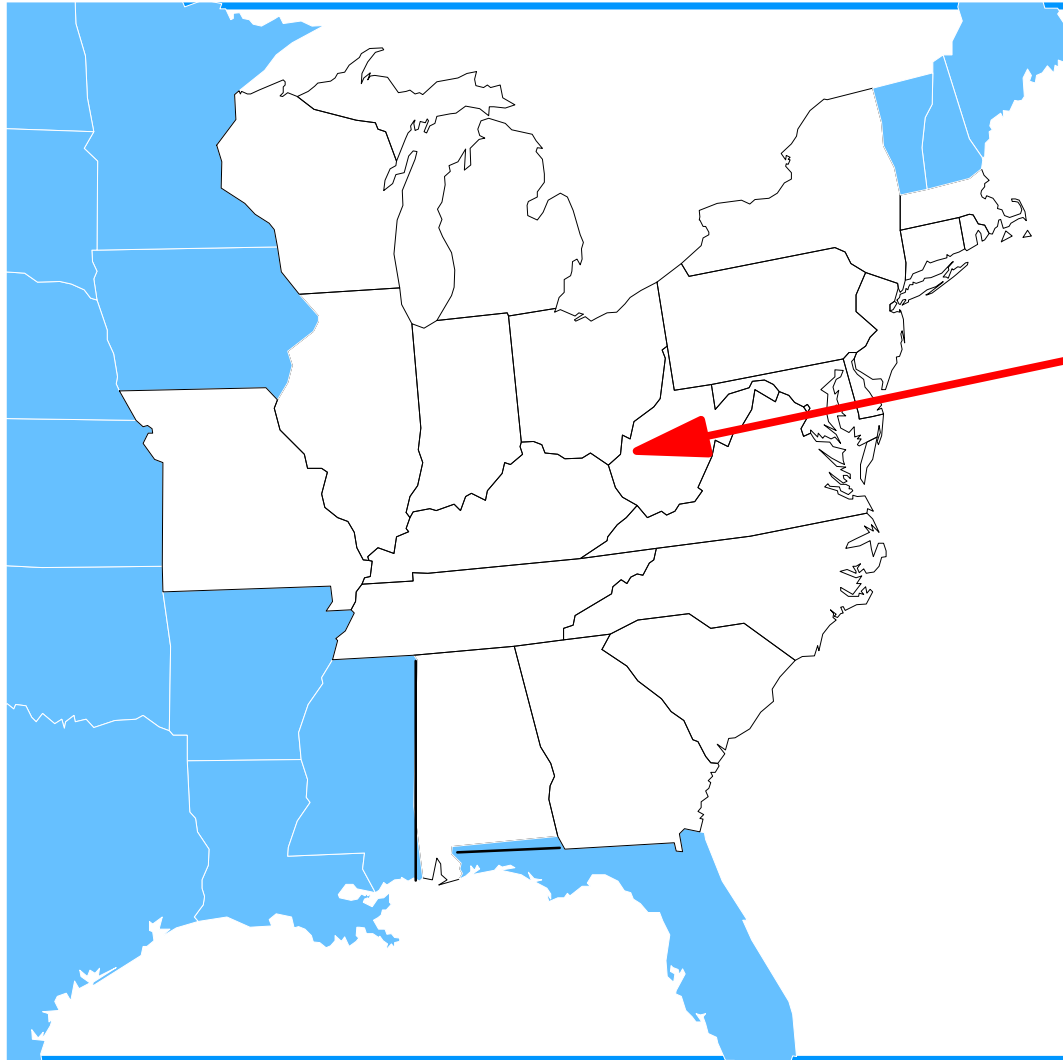
- Regional NO<sub>x</sub> reductions are effective ... the more NO<sub>x</sub> reduced, the greater the ozone benefit.
- Ozone benefits are greatest where emission reductions are made ... benefits decrease with distance.
- Elevated and low-level NO<sub>x</sub> reductions are both effective.
- VOC controls are effective in reducing ozone locally and are most advantageous to urban nonattainment areas.

# OTAG control recommendations

- **Utility controls: up to 0.15 lb/mmBtu or 85% reduction on large sources**
- **Non-utilities: up to 70% reduction on large**
- **National Measures....**AIM coatings, consumer & commercial products, autobody refinishing, reformulated gasoline, small engine standards, heavy duty highway 2g standard, heavy duty nonroad diesel standard, and locomotive standard with rebuild.
- **National Low Emission Vehicle**
- **Vehicle Emission Inspection and Maintenance Controls**



**Which States got SIP call? .... 22 and DC**



***SIP call  
States in  
white***

## How is EPA developing NOx budgets?

- Apply reasonable, cost-effective controls
- Continue to develop new federal programs to reduce emissions from cars and other mobile sources
- Budgets include projected growth through 2007
- EPA used the upper range of the Ozone Transport Assessment Group's recommendation for point sources:
  - For large utilities, 0.15 lb. NOx/mmBtu ( about 85% decrease from 1990 levels)
  - For other large point sources, about 70% decrease

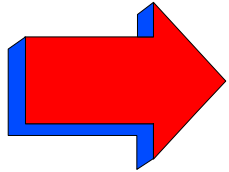
## **What is the timing?**

- **Issue proposed NOx SIP call ..... November 7, 1997**
- **Publish a supplemental proposal in Spring of 1998**
- **Receive public comments**
- **Finalize SIP call ..... September 1998**
- **State SIPs due to EPA ..... September 1999**
- **Compliance with stationary source emission limits .....  
September 2002**

**Moving to Section 126  
Petitions**



## **What does Section 126 of the Clean Air Act do?**

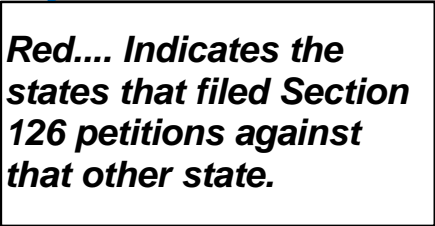


**Authorizes a downwind State, or political subdivision thereof, to petition EPA for a finding that emissions from major stationary sources in an upwind State contribute significantly to nonattainment, or interfere with maintenance, of a NAAQS in the petitioning State**

## Summary of the Petitions

- **Petitions filed by 8 NE States: ME, NH, VT, MA, RI, CT, NY, PA.**
- **Petitions name, in aggregate, all 22 States and DC covered by ozone transport SIP proposal. [SIP call States]: AL, CT, DC, DE, GA, IL, IN, KY, MA, MD, MI, MO, NC, NJ, NY, OH, PA, RI, SC, TN, VA, WI, and WV.**
- **In addition, some petitions include MN, IA, AR, LA, & MS.**
- **Petitions cover utility and non-utility major stationary sources.**
- **Some petitions name specific sources; some source categories.**
- **All petitions, except PA, name upwind States within the OTR in addition to States outside the OTR.**
- **The OTR, established by the 1990 CAA, is comprised of 12 Northeastern States and DC. The States and DC work together to assess ozone transport in the OTR and recommend strategies for mitigating interstate pollution.**
- **Many petitions use a common set of OTAG technical information supplemented with State-specific analyses or data.**

**Which States are named in the Petitions?**



## **What's the timing for action?**

- **Sec. 126 gives EPA 60 days to make a finding or deny the petitions.**
- **Sec. 307(d)(10) provides EPA with 6 additional months if EPA determines that the additional time is needed to complete the rulemaking process.**
- **On October 14, 1997, EPA determined ....**
  - **60-day time period to make findings is not sufficient.**
  - **granted itself extensions to evaluate petitions and develop an appropriate rulemaking schedule.**
- **On December 18, 1997, EPA and the 8 States completed Memorandum of Agreement (MOA) on the schedule for timely action on petitions.**



## **What's the timing for action? (cont.)**

- **On February 25, 1998, the eight petitioning States filed suit to compel EPA to take action on the States' section 126 petitions.**
- **EPA and the eight States filed a proposed consent decree that would establish a schedule for acting on the petitions.**
- **Rulemaking schedule for petitions in consent decree embodies the terms of the section 126 MOA.**
- **EPA has solicited comments on the proposed consent decree (63 FR 10874, March 5, 1998). Comment period closed April 6, 1998. EPA is reviewing the comments.**

# **Agreement Between EPA and the NE States**

- **Advance notice of proposed rulemaking: April 1998**
- **Proposed rulemaking: September 1998**
- **Final rulemaking: April 1999**
- **Implement controls within three years of finding**
- **NOx Budgets adopted by States and approved by EPA may result in revisions to prior EPA action on the petitions**

## **Agreement Between EPA and the NE States (cont.)**

- **Alternative schedule - allows States subject to NOx SIP call the opportunity to respond with SIP before findings on petitions are triggered**
- **determine that applicable petition would be approvable based solely on technical considerations by April 1999 and promulgate control remedy**
- **if EPA does not propose approval of NOx SIP by Nov 1999, sec. 126 findings are triggered on that date**
- **if EPA does propose approval of NOx SIP, but does not grant final approval of NOx SIP by May 2000, sec. 126 findings are triggered on that date**
- **if EPA grants final approval of NOx SIP by May 2000, EPA must take any further actions needed to complete its action under sec. 126, by that date.**

## **Approaches Recommended in the Petitions**

- **Several petitions request EPA set levels similar to those in the OTC's NO<sub>x</sub> Memorandum of Understanding:**
  - **Boilers 250 mmBtu/hr or greater.**
  - **Electric utility generating facilities 15 megawatts (MW) or greater**
- **Control levels in 2003:**
  - **For most States, either 0.15 lbs/mmBtu or a 75% reduction from 1990 NO<sub>x</sub> levels**
  - **In certain areas, either 0.20 lbs/mmBtu rate or a 55% reduction**

## **Approaches Recommended in the Petitions (continued)**

- **Two petitions name "electricity generating plants," but do not specify any size cutoff.**
- **One petition names sources that generate ten or more tons of NO<sub>x</sub> per day (EPA's SIP call proposed a cutoff at 1 ton per day).**
- **Several petitions request a cap and trade program.**
- **Some petitions suggest an electricity output standard, which could encourage energy efficiency.**
- **Others suggest control levels similar to those in EPA's SIP call proposal.**

## **What Options Might Reduce Impacts of the Petitions?**

- **Assuming that EPA grants one or more petitions and that, in general, SBREFA "small entities" are also small emitters of NO<sub>x</sub> emissions.**
  - **Should EPA set an emissions cutoff, exempting small emitters? What levels should EPA consider?**
  - **Some petitions specify a cutoff level; others do not; what levels should be considered?**
  - **Should EPA exempt sources below a certain emissions level (tons/day) ?**
  - **Should EPA exempt sources below a certain size or capacity level (mmBtu or MW)?**

## **Options That Might Reduce Impacts of a Petition (continued)**

- **EPA intends to include in any petition approved an emissions trading program for all large boilers and gas turbines .**
  - ▶ **Is a trading program the right approach for this group of sources?**
  - ▶ **How should EPA develop a trading program so that it would best ensure reducing costs?**
  - ▶ **Alternatively, is setting requirements on a source-by-source basis better?**

## **Options Under Consideration that Might Reduce Impacts of the Petitions**

- **Focus controls on large (2 tons/day or greater) and medium sources (between 1 and 2 tons/day) by exempting sources below a certain emissions level. Examples of these emissions levels: 1 ton/day, 250 Mbtu/hr, or 25 MWe.**
  - **Emissions from small sources appear to be a small proportion of total emissions (roughly 10%), though they appear to constitute most of the sources that might be affected (roughly 90%).**
  - **Avoiding controls on small sources would limit administrative complexity and reporting costs**



## **Options Under Consideration that Might Reduce Impacts of the Petitions (cont.)**

- **Consider options with an average cost-effectiveness below certain levels (cost/ton control).**
  - **Large and medium sources are likely to comply more cost-effectively due to economies of scale (cheaper control cost/ unit of production as production capacity increases)**
  - **Small sources are likely to have more difficulty in raising the available capital needed to acquire control techniques to comply with petitions**

## **Data Needed for Small Entity Analyses**

- **Establish link between sources and entities**
  - **A source as defined by OTAG is not an entity. A source is an emission point at an individual plant; an entity is a firm.**
  - **Most economic and financial data that is available is at an entity level; our cost data estimates impacts at a source level. This data is often not available for small firms (through Dun & Bradstreet, Moody's Industrial Manual or other widely available databases)**

## **Data Needed for Small Entity Analyses (cont.)**

- **Definition of small entity (supplied by SBA) is by no. of employees per firm, total revenues, or production capacity. These definitions vary by 4 digit SIC code.**
- **Linking available source data to entity data will allow for better estimates of potential small entity impacts. This will aid in efforts to mitigate potential impacts of regulatory alternatives on small entities - if they are predicted to occur.**